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Author(s): Tina J. Friis

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The Creative Human Being

A feature on Creativity and Gender

By Tina J. Friis

Neanderthals were gender-neutral. We changed, and the gender division could have started at that very profound and hardly arguable perception in the early human minds: that gender division is crucial for the survival of our species. Throughout time, we have however continued the creative utilisation, and further reinforced our gender difference. Biologically it makes no sense that our brain react differently, as our brain is indeed alike, apart from variation in size. However, the wiring system in our brain is as different as there are persons. How the wiring system is made, structured and formed is still to be discovered. But it affects us in how, who and what we are, and limits us creatively.

Do I wish that we lived in a world where gender did not figure so prominently? Of course. Do I even think about myself as a woman when I go to make art? Of course not.

(Judy Chicago, feminist artist, author, and educator)

For someone to state: "He/she is such a Neanderthal!" about a male or female chauvinist, would be to make an incorrect statement. Reason is, that Neanderthals were gender-neutral! Surprised? You may now think: "What happened next?" Our World of today pays great attention to gender, and unfortunately less attention to the fact that we are all human, the one and same creative being. The matter of gender in our society is intertwined with a whole range of issues that are not discussed in this feature: feminism, marketing, society structure, culture, race, ethnicity, class and much more. This feature will discuss the gender issue with focus on evolution and neuroscience. Starting all the way back at the Neanderthals, I will aim to discuss how we as a species have utilised our gender differences throughout history. Our ways have indeed been most creative, and some possibly the reason for our survival as a species. I will explore whether we are still living the same patterns as our early ancestors.

The feature will then discuss whether we are truly mentally different as men and women. Do we react and respond differently? Does the male brain function differently from the female brain? Science argues that nature and nurture matters when it comes to our behaviour, skills and possibilities. Does gender play a role as well? If so, does it affect us in the matter of creation?

One question remains to be the most exiting. Can we, once again, utilise our gender in a creative way to ensure an amazing future for our species?

Introduction

The Unquestionable Dissimilarity

A deliberate division of and focus on gender have always created a certain rebellious sense within me. Sure, it has its justified purpose in some clothing, public toilets and saunas, but other than that, I am in favour of unisex. Basically, I am not fond of any form of categorisation that unconsciously creates a point of view as to who, how and what we are. However, escaping from the gender categorisation is very challenging. To take a biological view at gender, its function is the simple need of reproduction and survival of the species. That is the case for almost all animal species. Humans, however, seem to have made gender into a dissimilarity so profound that it can almost be classified as a disability: Male? or Female?

Please take a moment to think about your answers to these questions:

What does our gender mean to us? How does it affect the creativity of the lives we lead, and the society we build? Does your gender define who, how and what you are? Could you change that? Could you re-define your meaning of gender? And would that suddenly make you less of a person? How would it change your perceptions, skills and possibilities? Would you be more or less successful? More or less empathetic? More or less creative?

In the recently published book *Delusions of Gender*, Australian cognitive psychologist Cordelia Fine questions the scientific claims about the differences between the sexes in the latest research in developmental psychology, neuroscience, and social psychology. She argues that the reason why there are so few women in science and engineering, and so few men in the laundry room is not due to our brains, but rather due to old myths. That we are not mentally gender-different. Through time there has been a double-sided aspect to gender, where the humans on one hand have utilised and promoted the genders, and on the other hand fought the gender issue. Today it has become something very complex, involving a lot more than simply answering the question whether you are

male or female; and is affecting our society in both subtle and direct ways. Possibly even our creativity of existence. This feature will take a look at how we started out as gender-neutral, to utilise our gender most creatively in order to survive, then manifesting the created gender division more or less unconsciously, and now possibly aiming at something gender-new. As cognitive psychologist Cordelia Fine, the feature will suggest that we are stuck in old-fashioned, very old-fashioned, ways. Ways that unconsciously have made its way to our brains to manifest itself there, and in our reality.

The evolution of gender

Studies of sites occupied by the earliest form of life show in various ways that in Neanderthal societies everyone, - men, women, children, - participated in the hunt, suggesting that Neanderthals were gender-neutral. However, in the earliest form of the modern human in Europe, the Cro-Magnon societies, it seems to be more reasonable to assume a gender division in the activities. In other words, a gender specific change occurred. One reason for changing from the Neanderthal society way of life to the new gender divided way of life in the Cro-Magnon societies, could be a more efficient exploitation of the environment. Our Cro-Magnon ancestors have creatively discovered that having men hunt large game, while women and children hunt small game, gather plant foods and make clothes, is simply more efficient.

An image appears before me of a Cro-Magnon society meeting, discussing options, taking notes and deciding by vote to make this efficiency change. However, the gender division evolution was quite an unconscious choice. This creative point of evolution and its purpose was not discussed or noted despite its importance: ensuring the survival of the species. It worked! The modern humans, who adapted and developed a versatile division of labour between men and women, survived. The entire Neanderthal population, who seemed to have engaged all in a single main occupation, the hunting of large game, were outgrown.

It seems reasonable to argue that the gender division could have started at this very profound and hardly arguable perception in the early human minds: that gender division is crucial for the survival of our species. Throughout time, we have however continued the creative utilisation, and further reinforced our gender difference. To argue this, the following text with take basis in a very interesting model of existence, Power Over - Personal Power, which is a result of “poisonous pedagogy” in works by Alice Miller and John Bradshaw. The model is used to describe a toxic method of teaching and raising children. However, the model can be viewed in a must larger scale, and also in relation to our definition of gender. Microcosms (e.g.. an individual life) influences the

macrocosms (e.g.. our civilisation), and it is interesting to draw on the Power Over - Personal Power model to explore, how control and dominance have been factors in our lives, and in the World, for thousands of years, also affecting the matter of gender.

Let us imagine that the Cro-Magnon creative way of survival, having women and children “at home”, while the manhunt, transformed into an unconscious socialised fact. It was not debatable, not even thought of as debatable. Only problem is that all animals’, human beings included, purpose of existence is evolution. As the human species evolved it became increasingly difficult to justify this unconscious perception that “home” is safest for the women. Therefore stronger, more creative actions were needed to ensure survival. That became Power Over, and there are many examples of Power Over in our individual lives and in our World throughout time. One example: in our minds, wizard and witch have taken on gender stereotypes. The term “wizard” most often refers to a male user of mysterious and supernatural forces; whereas a “witch” is more likely to be viewed as a female with evil magic powers. Through time thousands of women have been tortured and killed, in an effort to get them to confess that they flew through the sky, had sexual relations with demons, turned into animals, and engaged in various sorts of black magic; and for being women? There are no similar indication of thousands of men having been tortured and killed, though some may, however wizards were recognised for their great skill, power and wisdom; and for being men?

It is interesting how the same skill in either a man or a woman can be perceived so very differently; and how much effort have been awarded to stop one, though enhance the other, for reasons that can only seem to be gender specific. Could it be that Power Over has been employed to keep women, and the species, “safe”? Today witches and wizards are gender-neutral, but our minds may still be stuck in the old stereotype, even in vicious name-calling. The process through which an individual person learns, accepts and gets to perceive roles in our society is called socialisation. Through socialisation we are trained in wanted and unwanted behaviour. Socialisation happens everywhere, all the time, throughout life: with our family, at school, at work, through the community, government, and media. In some other cases, various forms of coercion have been used to acquire a desired response or function, - the concept of Power Over. World War II is a very profound and recent example of an event in our evolution and society where we creatively have utilised our gender in order to survive. In a time of necessity or emergency women and men have proven capability to perform functions, which in general would be considered non-suitable for their gender, actually proving gender-nonsense. We disregard what socialisation have encouraged us to perceive.

19 million women joined the paid labour market during World War II. 5 million of these women were first-time workers, many of them married, white, middle-class women, who responded to the government recruitment campaigns. These women were regarded as heroes. That is a huge contradiction to the men who bravely chose not to become a soldier, or rather tried to avoid becoming a soldier. There were no heroes there. Most men and women were however unable to give up their traditional roles in society and in the family when the war was over. But even if invisible at the war's end, the war still made a difference in regards to gender. A few men and women changed from the socialised Power Over to a new view of life in Personal Power. Women chose to remain on the labour market, and men chose not to be soldiers, freely and without condemnation.

Conclusively, we have seemingly in the earliest times of mankind created the foundation to the gender division. Besides having these deep roots in our unconscious, instinctive, and social behaviour, the gender division could be argued to have developed and manifested itself through time via Power Over. It could be that gender matters in our society because that is the society we have created ourselves.

We have been on our two feet (raising from four, defining us as being the genus Homo) for about 2,4 million years. Science argues that we became the "thinking human", Homo Sapiens, around 50,000-100,000 years ago. It is also argued that we only as little as 10,000 years ago had developed the size of the human brain as we know it today. Conclusively, we have been an "instinctive human" almost the entire 2,4 million years, a "thinking human" for less than 5% of the time, and have had the full developed brain for less than 1% of the time. It is understandable that we in unconscious ways carry on utilising our gender division in order to survive as a species, and the concept of Power Over could be keeping us there.

The differences in the mind

There are quite a few external and visible differences between men and women, if we refer to the norm. Differences in muscle mass, genitals, hair growth and bone structure. If you choose to look out of the norm, you will find women looking like men, and men looking like women. Internally we are rather similar as well, however a male heart can be as much as 25% larger than a female heart; and a male brain can be as much as 11-12% larger than a female brain. Is that because the male brain is functioning in a "bigger way"? Initial recent research shows that there may be a gender specific difference when it comes to some brain functions. For example our reaction to stress.

Stress in men seems to be associated with the right prefrontal cortex. The prefrontal cortex is found in the front part of the brain, at your forehead. This specific region of the brain is known to be the activity centre. It can plan complex cognitive behaviours, express your personality, control your decision-making and moderate your behaviour. It is the centre of your thoughts and actions based on information. This centre of the brain also handles your immediate reaction to a given stressful situation, and men seemingly react by activating this area of the brain, and by activating stress hormones. He will release two stress hormones: a) cortisol, from the adrenal gland, the endocrine glands that sit on top of the kidneys, and b) dopamine (also known as adrenaline) which can be released from several areas of the brain, e.g. hypothalamus or amygdala. The hormone release gives the man the strength to fight or flight, and to rebalance the homeostasis - this is our body's ability to physiologically regulate its inner balance and stability in response to outside factors.

In women, the research suggest, that stress primarily activates the limbic system. The limbic system is a larger part of the brain, and it consists of many different brain parts. It is found in the middle of the brain and consists of among other hippocampus, hypothalamus, and amygdala. In simplified metaphor these many several parts of the brain could be imagined as many smaller circles, which are then surrounded by a larger circle to form the limbic system. From the middle of this circle runs a complex wire system (your brain nerves, neurones), connecting this area to the basal forebrain. The limbic system is suggested to support a variety of functions including emotion, cognition and regulation of physical body functions, release of stress hormones, behaviour, decision-making, long term memory, and olfaction.

Conclusively, the research suggests that women appear to react to stress with a range of emotional and nurturing responses, whereas men seemingly react with a fight or flight response.

However, comprehensive neuroscience research suggests we are reacting to events as a result of very complex processes in various areas of the brain. This is interesting in relation to above research:

- 1) Both genders seemingly perform a release of stress hormones utilising the same area of the brain - amygdala. Amygdala, which is suggested to trigger an emotional response to a stressful event, does, directly or indirectly, create an emotional response in both men and women.
- 2) Research suggest a relation between the basal forebrain (utilised by women under stress) and the prefrontal cortex (utilised by men under stress), meaning that both genders could be reacting with the same brain areas, possibly by strange detour.
- 3) Hippocampus is another known stress processor. It stores the emotionally loaded experience in long-term memory. In primitive times, this brain action could have been essential for survival, since long-lasting memories of dangerous stimuli would be stored here. In the mentioned research,

men are supposedly not utilising this area when reacting to stress. How would they then remember to run away from the cave bear? Possibly via the direct reaction from the right prefrontal cortex, which simply reports: RUN! However, that information have had to be stored in the brain in order to report “Run!”

Considering whether the gender differences arose in direct proportion with the thinking human, it certainly makes sense that a man would have the RUN-reaction stored in the brain to respond to a dangerous cave bear while at hunt; but that the Cro-Magnon woman did not develop this reaction as profoundly, as she was “at home”, and in less risk of meeting danger.

Present research seem to leave confusion as to whether there are gender differences in our brain functions, however on-going research will undoubtedly show a broader picture still. As Cordelia Fine argues in her book, *Delusions of Gender*, the basis of the scientific evidence can be questioned. To get realistic results, the number of people, race, culture, class, ethnicity and many other aspects should be higher. The diversity is possibly too narrow, and if looking further we may find as many similarities as differences.

It is likely to assume that the male and female brain is similar apart from an irrelevant variation in size, suggesting no physiological gender-difference. However, research shows that the function of our neurones, the wiring system in our brain, is as different as there are persons. How the wiring system is constructed, structured and shaped is still to be fully discovered. Nature and nurture is an interesting aspect when studying neurones and their functions. Science argues that behaviour is not just down to innate genes, but additionally a whole array of life-continuous influences from everything we are exposed to: what we taste, see, hear, touch and sense, to all experiences and the socio-economic status. Behavioural development thus involves a complex system in which genes and environmental factors constantly and continuously interact throughout life, presumably affecting our neural activity.

Research also suggests that we are all born within a certain intelligence quotient level range (IQ) and emotional intelligence quotient level range (EQ). Dependent on all the aspects of nature and nurture, the IQ and EQ will increase or decrease over time and through generations. It is reasonable to assume that nature and nurture has a huge affect when it comes to gender perception in our minds. Imagine Tarzan growing up among apes, perceiving and believing he was an ape. What if a girl grew up among men only, or a boy grew up among women only. How would the nature and nurture affect the gender perception in relation to the brain functions as “male” or “female”?

Conclusion

The creative Human Being

The whole matter of gender may well be why we are still alive today. The concept gender has been utilised and manifested by the human species from the Cro-Magnon society through centuries, as a mean of creation, and in a matter of survival. It could very well be argued that through time, gender has become a socialised pattern, even to the point that it is visible in our brains by default. The neuroscience in the field is extremely exiting and amazing, but it can be argued whether we are wasting precious time on researching gender differences, when in fact that time could be spent on researching human capabilities.

Is it a boy or a girl? Hopefully, it is a baby! Considering that we are not born with the gender difference, but stuck in a very old pattern of perception, we can change the socialisation of our children. If our gender reality is what we have created ourselves, we can change it. We can discontinue Power Over to enhance Personal Power. Imagine the creativity released. If the reason why there are so few women in science and engineering, and so few men in the laundry room is not due to our brains, but rather due to old socialised patterns, we are creatively limiting our evolution and further creation for no legitimate reason. Do we have different qualities to offer, depending on whether we are male or female? Possibly, however, it is not a result of being male or female. Behaviour, skills and possibilities are more likely a result of who, what and how you are as a person. Our brain, whether male or female, is equally conscious, aware and creative. It is a personal choice what to make of it, and to choose not to be limited in our creativity. As mentioned in the feature, microcosms (e.g. an individual life) influence the macrocosms (e.g. our civilisation). All we have to do is start with ourselves.

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